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SCIENTIFIC NOTE

FIRST RECORD OF *CULEX* (*CULEX*) *CORONATOR* IN LOUISIANA, USA

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ABSTRACT. The 1st confirmed record of *Culex coronator* for Louisiana was made at Fort Polk, LA, from carbon dioxide–baited light trap and gravid trap collections performed from April to October 2004. In addition to the new record, 17 mosquito species in 5 genera (*Aedes, Anopheles, Coquillettidia, Culex,* and *Psorophora*) were collected. Collection-site and species distribution data are included.

KEY WORDS *Culex coronator,* Louisiana, mosquitoes, Culicidae, Diptera

We report a new state record of mosquito species, *Culex* (*Culex*) *coronator* Dyar and Knab from Fort Polk, LA. This is one of 18 mosquito species collected from Centers for Disease Control and Prevention (CDC) light traps baited with carbon dioxide and a CDC gravid trap (John Hock Co., Gainesville, FL), from various sites in Fort Polk from April to October 2004.

Culex coronator has a wide geographic distribution, including Central and South America (Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, El Salvador, French Guiana, Guatemala, Honduras, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, and Venezuela) and the USA (Arizona, New Mexico, and Texas) (Darsie and Ward 2004, Walter Reed Bioystematics Unit 2001). Carpenter (1970) discounted the report of S. O. Hill, B. J. Smittle, and F. M. Philips in 1958 about the presence of this species in Louisiana (reference not available but cited by Carpenter [1970]). Our paper confirms the existence of this species in that state.

This species colonizes a wide variety of container, ground pool, and stream-associated habitats throughout its range. It has been collected in permanent and temporary sources of water, in the shade or in the sun, and in sylvatic and domestic habitats (Carpenter and LaCasse 1955; Horsfall 1972; Pecor et al. 2002; Debboun, unpublished data). On April 29, 2004, the Entomological Sciences Division (ESD) of the U.S. Army Center for Health Promotion and Preventive Medicine–South (USACHPPM-South) received the adult specimens from Fort Polk, LA, as part of the USACHPPM-South West Nile Virus Surveillance Program. The 1st specimens were collected on April 21, 2004, at trap site no. 43 in Fort Polk (Fig. 1) by the U.S. Army Preventive Medicine Services personnel using a CDC light trap baited with carbon dioxide and sent to USACHPPM-South for identification and assay processing. These specimens were then sent to the Walter Reed Biosystematics Unit, Smithsonian Institution, for confirmation and were identified by J.E.P. and L.M.R. as *Cx. coronator* (Bram 1967, Darsie and Ward 2004). The classification used in this paper follows that of Knight and Stone (1977). Eight additional collections of *Cx. coronator* were made during 2004. A total of 18 species in 5 genera were collected from May to October 2004. The collected associated species were *Aedes* (*Stegomyia*) *albopictus* (Skuse), *Anopheles* (*Anopheles*) *crucians* Wiedemann, *An.* (*Ano.*) *punctipennis* (Say), *An.* (*Ano.*) *quadrimaculatus* Say, *Coquillettidia perturbans* (Walker), *Cx.* (*Melanoconion*) *erraticus* (Dyar and Knab), *Cx.* (*Cux.*) *nigripalpus* Theobald, *Cx.* (*Cux.*) *quinquefasciatus* Say, *Cx.* (*Cux.*) *salinarius* Coquillett, *Aedes* (*Ochlerotatus*) *atlanticus* Dyar and Knab/*tormentor* Dyar and Knab, *Ae.* (*Och.*) *fulvus pallens* Ross, *Ae.* (*Och.*) *infirmatus* Dyar and Knab, *Ae.* (*Och.*) *thibaulti* Dyar and Knab, *Ae.* (*Och.*) *canadensis canadensis* (Theobald), *Ae.* (*Och.*) *sticticus* (Meigen), *Psorophora* (*Janthinosoma*) *ferox* (Von Humboldt), and *Ps.* (*Grabhamia*) *columbiae* (Dyar and Knab).

Twenty-three female specimens of *Cx. coronator* were collected in 2004, with 22 females from the CDC light traps and 1 from the CDC gravid trap (site no. 45, 31°02.29′N, 93°13.90′E). The descriptions of the trap sites in Fort Polk are as follows, with the date of collection and number of female *Cx. coronator* collected given in parentheses. Trap site no. 3 (31°02.08′N, 93°12.79′E, August 26, 2004, 10 females) was inside a tree line, across the street from the barracks, building no. 2300 and adjacent to an old beaver pond on Mississippi Avenue. Trap site no. 37 (31°02.42′N, 93°13.48′E, May 19, 2004, 1 female and on August 24, 2004, 7 females) was in the backyard of a housing quarters (no. 5116) overlooking a primarily dry, low area with a manhole cover approximately 30 feet away.

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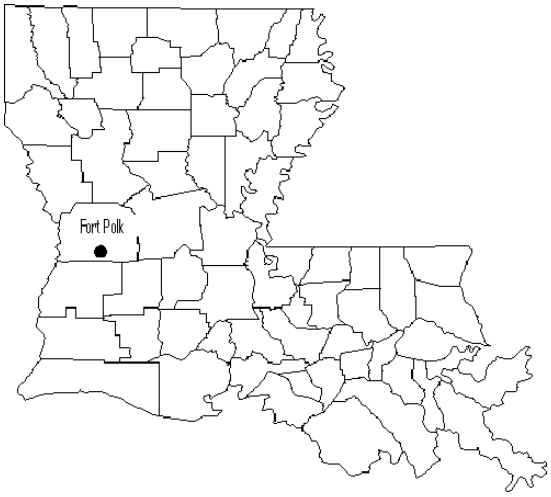

Fig. 1. Map of Fort Polk, LA, showing the collection site of *Culex coronator* where it was 1st collected on April 21, 2004.

Trap site no. 43 (31°02.90′N, 93°12.94′E, May 25, 2004, 1 female) was behind the Veterinary Clinic kennels (building no. 665), located on a bluff about 20 ft above the tree canopy and overlooking a heavily forested area. Trap site no. 45 (31°02.29′N, 93°13.91′E, August 24, 2004, 1 female) was located near a sentinel chicken flock, near Magnolia Drive and between Monroe Drive and Michael Drive. This site was shady and damp, near a lift station (building no. 5292) in an old forest area next to a recently cleared sewage line right-of-way. Trap site no. 50 (31°02.74′N, 93°13.36′E, May 19, 2004, 1 female) was located in Norris Loop, near the 4900 block lift station, housing area, recently cleared forest area in the middle of housing with poor drainage and heavy organic debris. Trap site no. 51 (31°01.45′N, 93°12.12′E, October 6, 2004, 1 female) was in the Honor Field, to the left of the stands near the tree line. Trap site no. 52 (31°02.49′N, 93°12.18′E, May 25, 2004, 1 female) was on Texas Avenue, across from building no. 3334, in a recently cleared tree line with heavy organic debris.

Adult females of *Cx. coronator* have been collected from human bait in Brazil (Rachou et al. 1958, Roberts and Hsi 1979), and in Peru (Debboun, unpublished data). However, Carpenter and LaCasse (1955) noted that the females apparently do not feed on humans in the USA. This species also has been collected from chicken and rabbit baits in Argentina (Almiron and Brewer 1995). Turell et al. (2000) reported that *Cx. coronator* is not susceptible to epizootic (IAB and IC) and enzootic (ID and IE) strains of Venezuelan equine encephalomyelitis virus (VEE) in Peru. However, Scherer et al. (1971) isolated VEE from *Cx. coronator* in southeastern Mexico. Anderson et al. (1957) and Aitken et al. (1969) also reported St. Louis encephalitis virus isolation from wild-collected female *Cx. coronator* in Trinidad. It is 1 of the 60 species found positive for West Nile virus (WNV) in mosquito pools in the USA from 1999 to 2004 (Centers for Disease Control and Prevention 2005).

Sample specimens of *Cx. coronator* and other associated species from CDC light traps and gravid traps collected from Fort Polk sites from May through October were all processed by the ESD, USACHPPM-South, assayed, and found negative for WNV and eastern equine encephalitis virus.

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